CLAIMS

[1] A compound represented by general formula (I): [Chemical formula 1]

wherein R₁ represents hydroxyl; and R₂ represents methoxy.

[2] A compound represented by general formula (II): [Chemical formula 2]

wherein R_3 represents hydroxyl; and R_4 represents methoxy.

[3] A compound represented by general formula (III): [Chemical formula 3]

wherein 3-hydroxy in 3-hydroxy-1-butenyl is in a 3S configuration.

[4] A carcinostatic agent comprising as an active ingredient a compound according to claim 1 or 2.

[5] The carcinostatic agent according to claim 4 for use in the treatment of animal or human cancer.

[6] The carcinostatic agent according to claim 4 or 5, wherein said cancer is leukemia.

[7] The carcinostatic agent according to claim 6, wherein said leukemia is acute myelogenous leukemia.

[8] An anti-acute myelogenous leukemia agent comprising as an active ingredient one or at least two compounds selected from a compound represented by formula (I) wherein R_1 and R_2 represent hydroxyl, a compound represented by formula (I) wherein R_1 represents a hydrogen atom and R_2 represents a hydrogen atom and R_2 represents a hydrogen atom and R_2 represents methoxy,

a compound represented by formula (II) wherein R_3 and R_4 represent methoxy, a compound represented by formula (II) wherein R_3 represents methoxy and R_4 represents hydroxyl,

a compound represented by general formula (IV): [Chemical formula 4]

a compound represented by general formula (V): [Chemical formula 5]

, or

- [9] The anti-acute myelogenous leukemia agent according to claim 8 for use in the treatment of animal or human acute myeloid leukemia.
- [10] A process for producing a composition comprising compounds according to claims 1 to 3 and 8, said process comprising:

providing a raw material comprising each of said compounds;

extracting said raw material with a solvent optionally under heating;

supplying said extract to an ion-exchange chromatograph where said extract is subjected to solvent extraction with a first lower alcohol, a second lower alcohol, and optionally a lower ester in that order,

whereby a composition comprising each of said compounds

is provided in a fraction of said second lower alcohol.

- [11] The process according to claim 10, wherein said raw material is a plant belonging to the family Compositae or a plant belonging to the genus Ludwigia of the family Onagraceae.
- [12] A process for obtaining compounds according to any of claims 1 to 3 and 8, said process comprising:

providing a composition comprising said compounds; and repeating the separation of said composition by chromatography a plurality of times to obtain said compounds.

- [13] The process according to claim 12, wherein said composition has been produced by the process according to claim 10 or 11.
- [14] A process for separating a composition containing compounds according to claims 1 to 3 and 8 into a first composition and a second composition, said process comprising:

providing a composition comprising said compounds; and separating said composition by normal phase chromatography and then by reverse phase chromatography into a first composition and a second composition,

said first composition comprising compounds according to claims 1 to 3, a compound represented by general formula (I) wherein R_1 and R_2 represent hydroxyl, a compound represented by general formula (IV), and a compound represented by general formula (V),

said second composition comprising a compound represented by general formula (I) wherein R_1 represents a hydrogen atom and R_2 represents hydroxyl and a compound represented by general formula (I) wherein R_1 represents a hydrogen atom and R_2 represents methoxy.

- [15] The process according to claim 14, wherein said composition has been produced by the process according to claim 10 or 11.
- [16] A process for producing compounds according to claims 1 to 3, a compound represented by general formula (I) wherein R₁ and R₂ represent hydroxyl, a compound represented by general formula (IV), and a compound represented by general formula (V), said process comprising:

providing a composition comprising said compounds; and

separating said composition by normal phase chromatography, reverse phase chromatography, liquid chromatography, or a combination thereof to isolate said compounds.

- [17] The process according to claim 16, wherein said composition is a first composition produced by the process according to claim 14 or 15.
- [18] A process for producing a compound represented by general formula (I) wherein R₁ represents a hydrogen atom and R₂ represents hydroxyl and a compound represented by general formula (I) wherein R₁ represents a hydrogen atom and R₂ represents methoxy, said process comprising:

providing a composition comprising said compounds; and separating said composition by normal phase chromatography, reverse phase chromatography, or a combination thereof to isolate said compounds.

- [19] The process according to claim 18, wherein said composition is a second composition produced by a process according to claim 14 or 15.
- [20] Compounds according to claims 1 to 3 and 8, produced by a process according to any one of claims 12 to 19.
- [21] An anti-ovarian cancer agent comprising as an active ingredient a compound represented by general formula (II) wherein R₃ and R₄ represent methoxy.
- [22] The anti-ovarian cancer agent according to claim 21 for use in the treatment of an animal or human ovarian cancer.
- [23] An anti-prostatic cancer agent comprising as an active ingredient a compound represented by general formula (II) wherein R₃ and R₄ represent methoxy.
- [24] The anti-prostatic cancer agent according to claim 21 for use in the treatment of an animal or human prostatic cancer.
- [25] A process for producing a composition comprising a compound represented by general formula (VI): [Chemical formula 6]

(II)

a compound represented by general formula (VII): [Chemical formula 7]

(III)

a compound represented by general formula (VIII): [Chemical formula 8]

$$OH_3$$
 OH_3 OH_2 OH_3 OH_3 OH_3 OH_3 OH_3 OH_3 OH_4 OH_5 OH_5

a compound represented by general formula (IX): [Chemical formula 9]

$$CH_3$$
 CH_3
 CH_3
 CH_3
 CH_3
 CH_3
 CH_3
 CH_2
 CH_3
 CH_2
 CH_3
 CH_3

said process comprising:

providing a raw material comprising said compounds; extracting said raw material with a solvent optionally under heating; and

supplying said extract to an ion-exchange chromatograph where said extract is subjected to solvent extraction with a first lower alcohol, a second lower alcohol, and optionally a lower ester in that order.

whereby a composition comprising said compounds is provided in a fraction of said second lower alcohol.

[26] The process according to claim 25, wherein said raw material is a plant belonging to the family Compositae or a plant belonging to the genus Ludwigia of the family Onagraceae.

[27] A process for obtaining compounds represented by general formulae (VI) to (IX), comprising:

providing a composition comprising said compounds; and repeating the separation of said composition by chromatography a plurality of times to obtain said compounds.

[28] The process according to claim 27, wherein said composition has been produced by the process according to claim 25 or 26.

[29] A process for separating a composition comprising compounds represented by general formulae (VI) to (IX) into a third composition and a fourth composition, said process comprising:

providing a composition comprising said compounds; and separating said composition by normal phase chromatography and then by reverse phase chromatography into a third composition and a fourth composition,

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said third composition comprising a compound represented by general formula (VI) and a compound represented by general formula (IX),

said fourth composition comprising a compound represented by general formula (VII) and a compound represented by general formula (VIII).

- [30] The process according to claim 29, wherein said composition has been produced by the process according to claim 25 or 26.
- [31] A process for producing a compound represented by general formula (VI) and a compound represented by general formula (IX), said process comprising:

providing a composition comprising said compounds; and separating said composition by normal phase chromatography, reverse phase chromatography, liquid chromatography, or a combination thereof to isolate said compounds.

- [32] The process according to claim 31, wherein said composition is a third composition produced by the process according to claim 29 or 30.
- [33] A process for producing a compound represented by general formula (VII) and a compound represented by general formula (VIII), said process comprising:

providing a composition comprising said compounds; and separating said composition by normal phase chromatography, reverse phase chromatography, liquid chromatography, or a combination thereof to isolate said compounds.

- [34] The process according to claim 33, wherein said composition is a fourth composition produced by a process according to claim 29 or 30.
- [35] Compounds represented by general formulae (VI) to (IX), produced by a process according to any one of claims 27 to 34.